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Product Information Notification

PIN

Product Group: SIL/Monday September 15, 2025/PIN-SIL-032-2025-REV-0

Revision in SQ3426CEEV Datasheet from Rev. A to Rev. B

For further information, please contact your regional Vishay office.

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Description of Change: As part of Vishay Siliconix commitment to Quality, we would like to extend to you a courtesy advisory notification of a datasheet revision for SQ3426CEEV (Doc #62147 Rev B attached). There is no change to the materials or processes used in the manufacture of this part.

The changes per this Advisory reflect updates as follows:

- Update continuous source current (Is) from 6A to 4.2A

This notification is for information only and there is no need for a response.

Reason for Change: Datasheet Revision

Expected Influence on Quality/Reliability/Performance: None

Part Numbers/Series/Families Affected: SQ3426CEEV-T1_GE3

Vishay Brand(S): Vishay Siliconix

Time Schedule:

Start Shipment Date: Tuesday June 24, 2025

Sample Availability: This is a datasheet revision only. There is no change to the materials or processes used in the manufacture of this part.

Product Identification: SQ3426CEEV-T1_GE3

Qualification Data: N/A

Issued By: Lance Gurrola, automostechsupport@vishay.com

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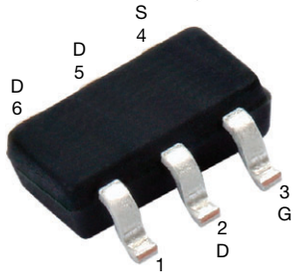
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Work-In-Progress

Automotive N-Channel 60 V (D-S) 175 °C MOSFET

TSOP-6 Single



Top View

FEATURES

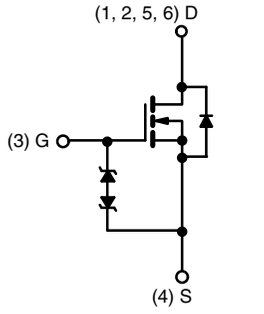
- TrenchFET® power MOSFET
- Typical ESD protection 800 V HBM
- AEC-Q101 qualified
- 100 % R_g and UIS tested
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

AUTOMOTIVE GRADE

Pb-free

RoHS COMPLIANT

HALOGEN FREE



N-Channel MOSFET

PRODUCT SUMMARY	
V_{DS} (V)	60
$R_{DS(on)}$ (Ω) at V_{GS} = 10 V	0.042
$R_{DS(on)}$ (Ω) at V_{GS} = 4.5 V	0.063
I_D (A)	7
Configuration	Single

Marking Code: 9IXXX

ORDERING INFORMATION	
Package	TSOP-6
Lead (Pb)-free and halogen-free	SQ3426CEEV (for detailed order number please see www.vishay.com/doc?79771)

ABSOLUTE MAXIMUM RATINGS (T_C = 25 °C, unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNIT
Drain-source voltage		V_{DS}	60	V
Gate-source voltage		V_{GS}	± 20	
Continuous drain current	T_C = 25 °C	I_D	7	A
	T_C = 125 °C		4	
Continuous source current (diode conduction)		I_S	4.2	
Pulsed drain current [a]		I_{DM}	29	
Single pulse avalanche current	L = 0.1 mH	I_{AS}	10	
Single pulse avalanche energy		E_{AS}	5	mJ
Maximum power dissipation	T_C = 25 °C	P_D	5	W
	T_C = 125 °C		1.6	
Operating junction and storage temperature range		T_J, T_{stg}	- 55 to +175	°C

THERMAL RESISTANCE RATINGS

PARAMETER		SYMBOL	LIMIT	UNIT
Junction-to-ambient	PCB mount [b]	R_{thJA}	110	°C/W
Junction-to-foot (drain)		R_{thJF}	30	

Notes

a. Pulse test; pulse width ≤ 300 µs, duty cycle ≤ 2 %

b. When mounted on 1" square PCB (FR4 material)

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SPECIFICATIONS (T_C = 25 °C, unless otherwise noted)							
PARAMETER	**SYMBOL**	**TEST CONDITIONS**		**MIN.**	**TYP.**	**MAX.**	**UNIT**
Static							
Drain-source breakdown voltage	V_{DS}	V_{GS} = 0, I_D = 250 µA		60	-	-	V
Gate-source threshold voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250 µA		1.5	2.0	2.5	
Gate-source leakage	I_{GSS}	V_{DS} = 0 V, V_{GS} = ± 12 V		-	-	± 500	nA
		V_{DS} = 0 V, V_{GS} = ± 20 V		-	-	± 1	mA
Zero gate voltage drain current	I_{DSS}	V_{GS} = 0 V	V_{DS} = 60 V	-	-	1	µA
		V_{GS} = 0 V	V_{DS} = 60 V, T_J = 125 °C	-	-	50	
		V_{GS} = 0 V	V_{DS} = 60 V, T_J = 175 °C	-	-	150	
On-state drain current [a]	$I_{D(on)}$	V_{GS} = 10 V	V_{DS} ≥ 5 V	10	-	-	A
Drain-source on-state resistance [a]	$R_{DS(on)}$	V_{GS} = 10 V	I_D = 5 A	-	0.0351	0.042	Ω
		V_{GS} = 10 V	I_D = 5 A, T_J = 125 °C	-	0.0627	-	
		V_{GS} = 10 V	I_D = 5 A, T_J = 175 °C	-	0.0793	-	
		V_{GS} = 4.5 V	I_D = 4 A	-	0.038	0.063	
Forward transconductance [a]	g_{fs}	V_{DS} = 15 V, I_D = 4 A		-	16	-	S
Dynamic [b]							
Input capacitance	C_{iss}	V_{GS} = 0 V	V_{DS} = 30 V, f = 1 MHz	-	756	1100	pF
Output capacitance	C_{oss}			-	69	100	
Reverse transfer capacitance	C_{rss}			-	29	55	
Total gate charge [c]	Q_g	V_{GS} = 10 V	V_{DS} = 30 V, I_D = 6 A	-	13	19.5	nC
Gate-source charge [c]	Q_{gs}			-	2.6	-	
Gate-drain charge [c]	Q_{gd}			-	1.9	-	
Gate resistance	R_g	f = 1 MHz		1.9	3.83	5.7	Ω
Turn-on delay time [c]	$t_{d(on)}$	V_{DD} = 30 V, R_L = 7.5 Ω I_D ≅ 4 A, V_{GEN} = 10 V, R_g = 1 Ω		-	7	10	ns
Rise time [c]	t_r			-	4	14	
Turn-off delay time [c]	$t_{d(off)}$			-	18	25	
Fall time [c]	t_f			-	4	6	
Source-Drain Diode Ratings and Characteristics [b]							
Pulsed current [a]	I_{SM}			-	-	29	A
Forward voltage	V_{SD}	I_F = 1.6 A, V_{GS} = 0		-	0.76	1.2	V
Body diode reverse recovery time	t_{rr}	I_F = 1.7 A, di/dt = 100 A/µs		-	18	36	ns
Body diode reverse recovery charge	Q_{rr}			-	14	28	nC
Reverse recovery fall time	ta			-	14	-	ns
Reverse recovery rise time	t_b			-	4	-	
Body diode peak reverse recovery current	$I_{RM(REC)}$			-	-1.76	-	A

Notes

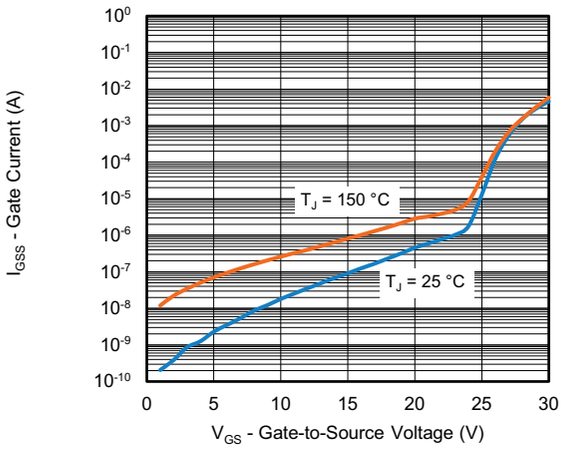
a. Pulse test; pulse width ≤ 300 µs, duty cycle ≤ 2 %
b. Guaranteed by design, not subject to production testing
c. Independent of operating temperature

Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

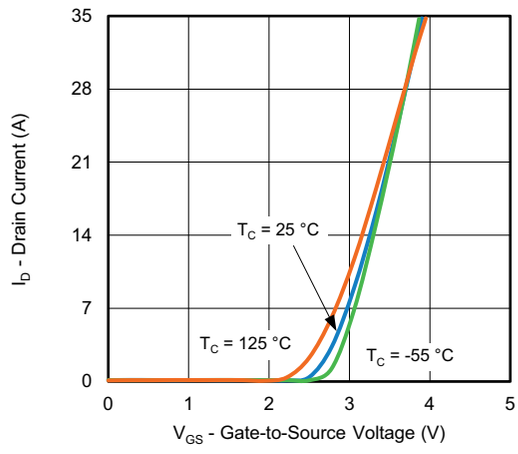
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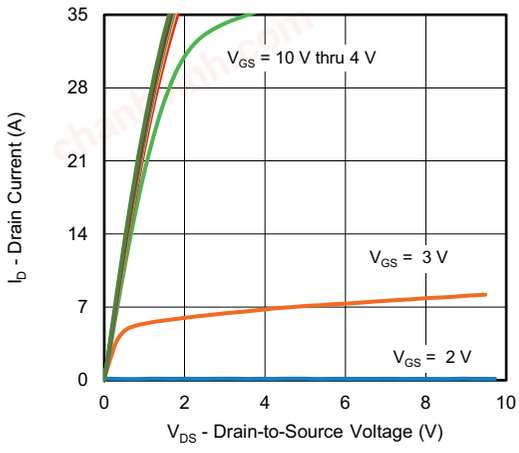
TYPICAL CHARACTERISTICS (T_A = 25 °C, unless otherwise noted)



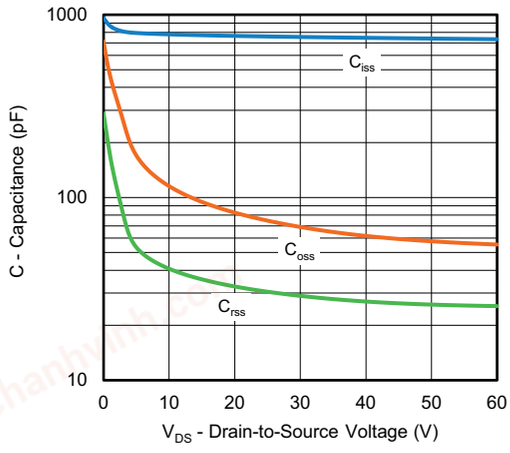
Gate Current vs. Gate-Source Voltage



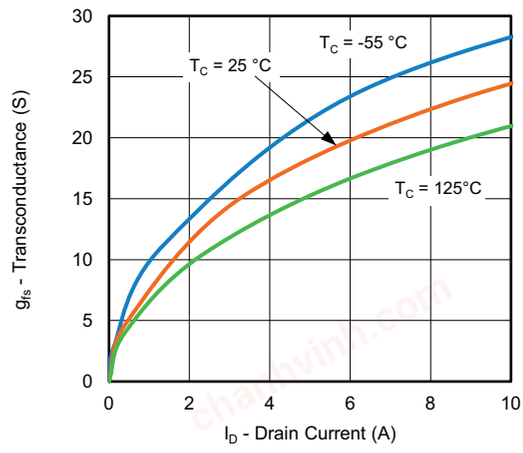
Transfer Characteristics



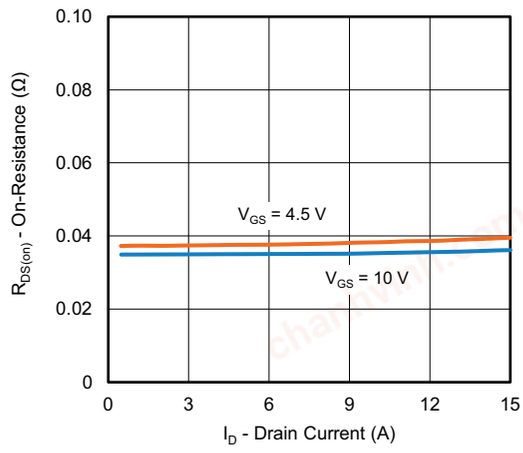
Output Characteristics



Capacitance



Transconductance

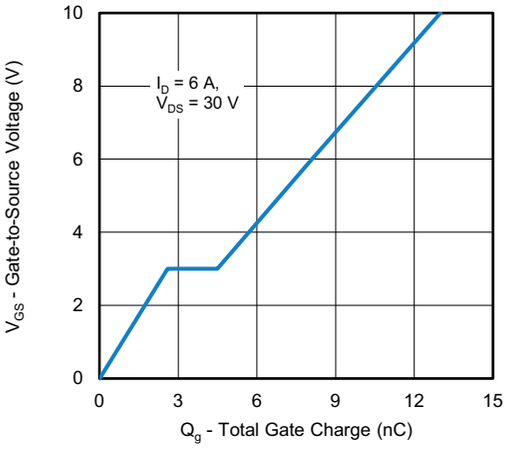


On-Resistance vs. Drain Current

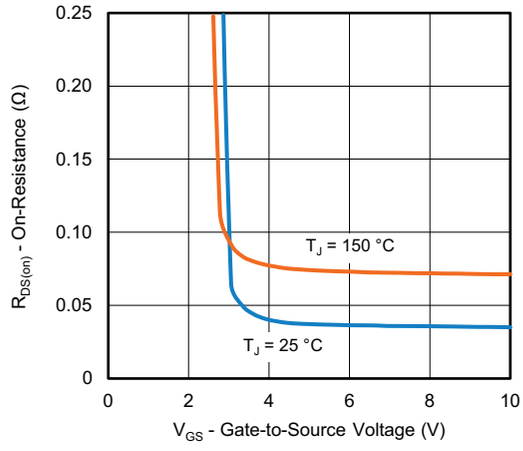
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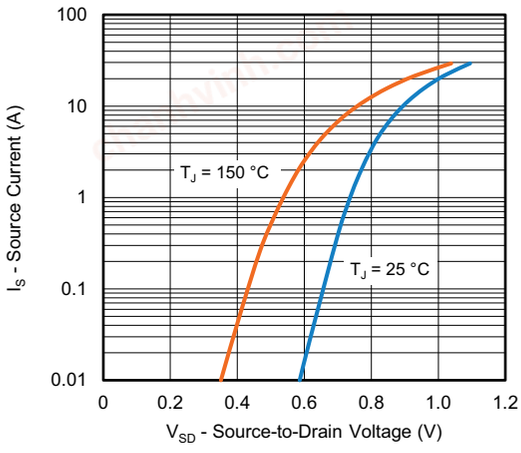
TYPICAL CHARACTERISTICS (T_A = 25 °C, unless otherwise noted)



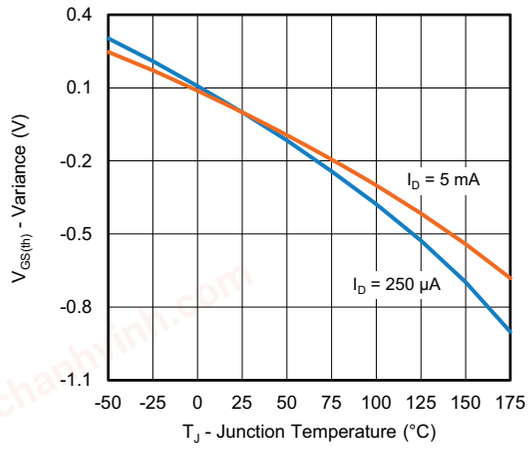
Gate Charge



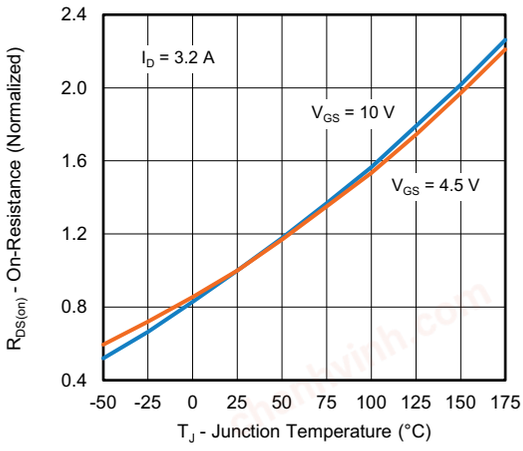
On-Resistance vs. Gate-Source Voltage



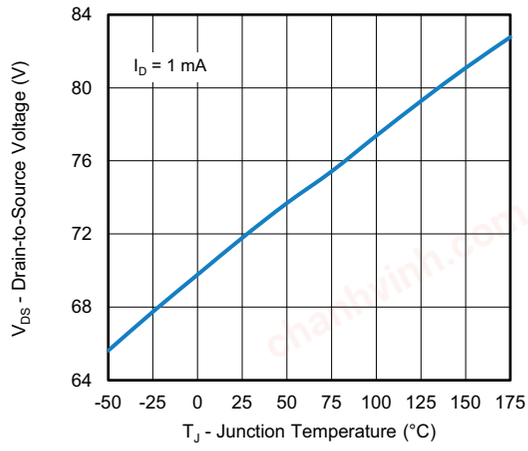
Source-Drain Diode Forward Voltage



Threshold Voltage



On-Resistance vs. Junction Temperature

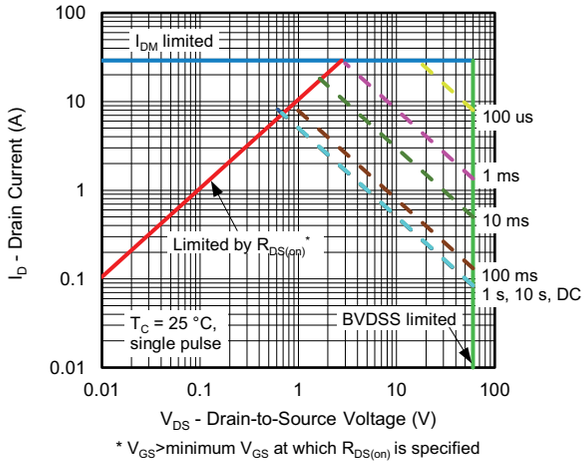


Drain-Source Breakdown vs. Junction Temperature

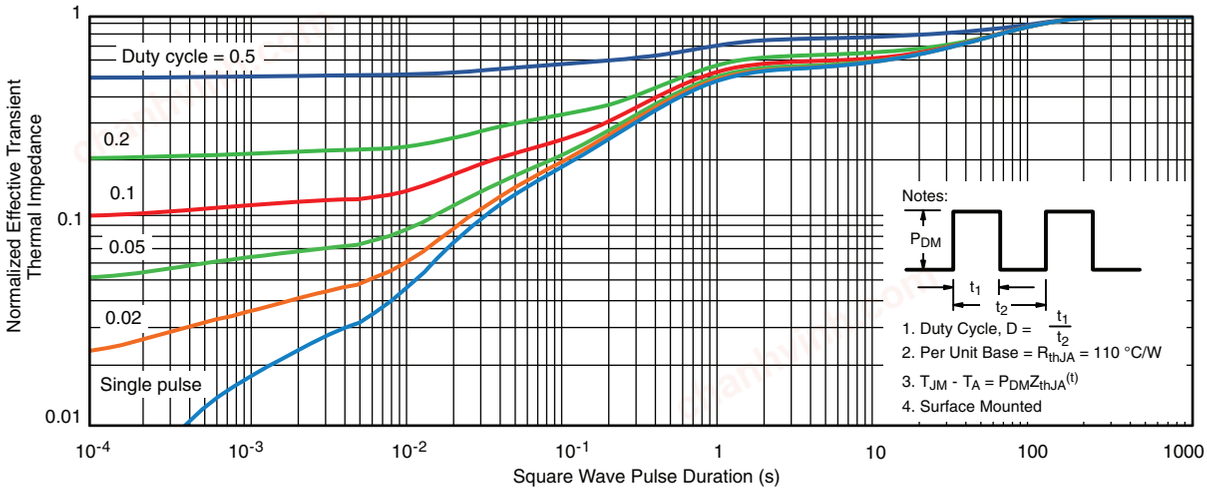
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THERMAL RATINGS (T_A = 25 °C, unless otherwise noted)



Safe Operating Area



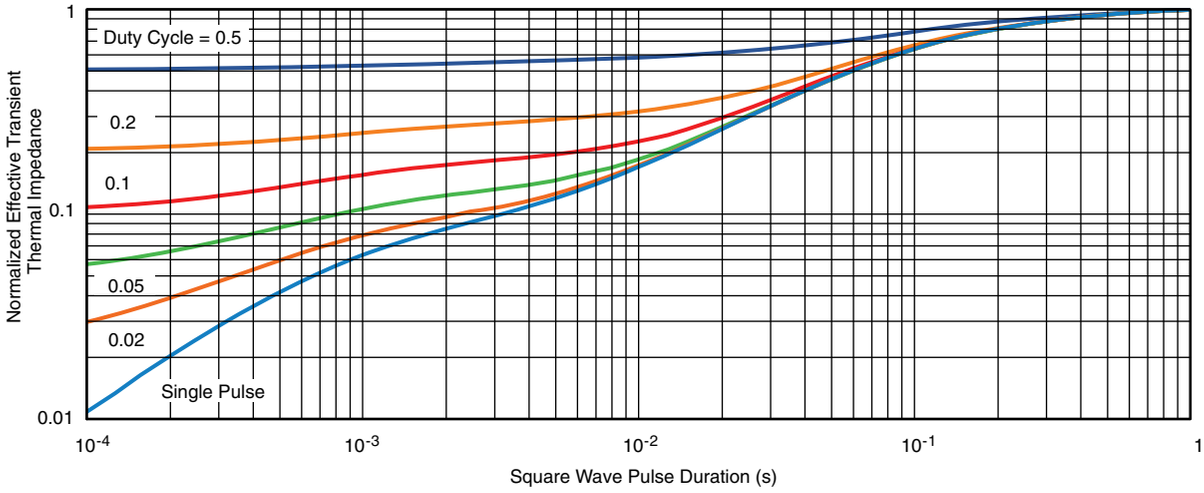
Normalized Thermal Transient Impedance, Junction-to-Ambient

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THERMAL RATINGS (T_A = 25 °C, unless otherwise noted)



Normalized thermal Transient Impedance, Junction-to-Foot

Note

- The characteristics shown in the two graphs
  - Normalized Transient Thermal Impedance Junction-to-Ambient (25 °C)
  - Normalized Transient Thermal Impedance Junction-to-Foot (25 °C)

  are given for general guidelines only to enable the user to get a “ball park” indication of part capabilities. The data are extracted from single pulse transient thermal impedance characteristics which are developed from empirical measurements. The latter is valid for the part mounted on printed circuit board - FR4, size 1" x 1" x 0.062", double sided with 2 oz. copper, 100 % on both sides. The part capabilities can widely vary depending on actual application parameters and operating conditions.

Vishay Siliconix maintains worldwide manufacturing capability. Products may be manufactured at one of several qualified locations. Reliability data for Silicon Technology and Package Reliability represent a composite of all qualified locations. For related documents such as package / tape drawings, part marking, and reliability data, see www.vishay.com/ppg?62147.

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